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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,912	05/14/2002	Michael O'Connor	42390.P3674R	1765

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EXAMINER	
VORTMAN, ANATOLY	

ART UNIT	PAPER NUMBER
2835	

DATE MAILED: 10/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/976,912	O'CONNOR ET AL.	
	Examiner	Art Unit	
	Anatoly Vortman	2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 September 2004 (Amendment)*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32,35-42,45-48 and 52* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32,35-42,45-48 and 52* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Reissue Application

Amendment

1. The submission of the amendment filed on 09/13/04 is acknowledged. At this point claim 30 had been amended and dependencies of claims 39-42 have been changed. No other amendments to the pending claims have been made. Claims 33, 34, 43, 44, and 49-51 have been previously cancelled. Thus, claims 1-32, 35-42, 45-48, and 52 are pending in the instant application.

Oath/Declaration and Claims Rejection-35 USC § 251

2. The reissue oath/declaration filed with this reissue application is defective because it fails to contain a statement that **all** errors, which are being corrected in the reissue application up to the time of filing of the oath/declaration, arose without any deceptive intention on the part of the applicant. See 37 CFR 1.175 and MPEP § 1414. The multiple errors are alleged (see line 4 of p. 3 of the "Declaration and Power of Attorney for Reissue Patent Application" filed on 09/13/04, wherein "the errors" are referred to). However, only "the error" is referred to in line 9 of p. 3 of the aforementioned Declaration. The "deceptive intent " statement should clearly and explicitly state that **all errors** arose without any deceptive intention. Applicant is advised to use the format of the statement as presented in MPEP § 1414 (III).

Claims 1-32, 35-42, 45-48, and 52 are rejected for the same reasons given in paragraph 3 of the first Office action (based on a defective oath as explained above).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 30 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claim recites: "first and second internal surfaces". The limitations had never been positively set forth in parent claims 28 and 29, and therefore are lacking proper antecedent basis. The amendment inserting "a" in front of "first and second internal surfaces" is insufficient to overcome indefiniteness rejection, since it is not clear what element these internal surfaces belong to.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-7, 9-14, 16-26, 28-32, 35-42, 45-48, and 52, are rejected under 35 U.S.C. 103(a) as being unpatentable over US/5,583,316 to Kitahara et al., (Kitahara).

Regarding claims 1,2, 5-7, 9,10, 12-14, 16-18, 20, 24-26, 28, 35, 37, 45, 21,29, 38, 41, 42, 46-48, and, as best understood regarding claim 30, Kitahara disclosed (Fig. 72, 73) an apparatus comprising: an air duct (3) comprising a housing made of thermally conductive material (aluminum, column 2, line 28) and (2, 91-94) having internal fins along an internal surface (can be clearly seen on member (2)), said air duct dividing and directing divided air flow from an inlet port (92) to a first and a second exit port (98), and an air flow generator (a fan) coupled to said inlet port (92) to produce the air flow, said duct coupled directly to a heat generating component (1) (an integrated circuit), **but** did not disclose a heat transfer means (a heat pipe).

On Fig. 50A, Kitahara teaches another embodiment of the apparatus comprising a heat transfer means (a heat pipe) (55) having an evaporator portion coupled to the heat generating component (1) and a condenser portion coupled to the air duct (2-4).

It would have been obvious to person of ordinary skill in the cooling art at the time the invention was made to supplement embodiment of Fig. 72 and 73 with the heat pipe of embodiment of Fig. 50A in order to adapt the embodiment of Fig. 72 and 73 for the situation when mounting directly on the heat generating component is not possible.

Regarding claims 19, 36 and 52, the method steps recited in the claims are inherently necessitated by the device structure as disclosed by Kitahara.

Regarding claims 3, 22, and 39, Kitahara disclosed (Fig. 73) that the housing includes a first plate (2) and a second plate (91) having respective first and second internal surfaces, the

first internal surface having a first array of protruding members that constitute internal fins (fins are clearly seen on Fig. 73).

Regarding claims 4, 11, 23 and, 40, Kitahara disclosed (Fig. 47 A, B) first and second plates (65, 66) having protruding fins on the respective internal surfaces.

6. Claims 8, 15, and 27, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitahara in view of US/4,923,000 to Nelson.

Kitahara disclosed all, but resonate cantilever vibrator.

Nelson disclosed (Fig. 1) a resonate cantilever vibrator employed as a cooling fluid flow generator for a cooling fluid.

Since inventions of Kitahara and of Nelson are from the same field of endeavor (cooling), the purpose of the cantilever vibrator disclosed by Nelson would be recognized in the invention of Kitahara.

It would have been obvious to a person of ordinary skill in the cooling art at the time the invention was made to substitute conventional cooling fan of Kitahara with cantilever vibrator of Nelson in order to simplify the device and to enhance the heat transfer characteristics (see Nelson, column 1, lines 1+).

Response to Arguments

7. Applicant's arguments filed on 09/13/04 have been fully considered but they are not persuasive.

The main thrust of the arguments is directed to the assumption that modification described in the outstanding 35 USC § 103 rejection was improper, because said modification "would change the principle of operation of the prior art invention" (see p. 16, lines 15-18 of the Amendment). The Examiner believes that this is not the case. The Examiner would like to direct the Applicant's attention to the fact, that two embodiments of the same invention have been used for modification. It is not clear why the Applicant states, that "heat pipe, would certainly impermissibly change the principle operation of Kitahara" (see p. 17, lines 5 and 6 of the Amendment), since said heat pipe is a part of the embodiment taught by the same inventor (i.e. Kitahara) and by the same reference. Also, the Examiner respectfully disagrees with the Applicant's statement that "the principle operation of Kitahara being to provide a heat sink system provided integrally with a fan for cooling the heat-generating element" (see p. 17, lines 6-8 of the Amendment). As it was mentioned earlier, Kitahara disclosed different embodiments of the same invention and one of said embodiments is where the heat sink is not integral with the fan as depicted on Fig.50A. Also what is important for a proper combination (modification) is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971). References (teachings) are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. *In re Bozek*, 163 USPQ 545 (CCPA) 1969.

Furthemore, as decided in *In re O'Farrel*, 7 USPQ 2d, 1673-1681, Fed. Cir. 1988, obviousness does not require absolute predictability of success. Indeed, for many inventions that seem quite obvious, there is no absolute predictability of success until the invention is reduced to practice. There is always at least a possibility of unexpected results, that would then provide an

objective basis for showing that the invention, although apparently obvious, was in law nonobvious. *In re Merck & Co.*, 800 F.2d at 1098, 231 USPQ at 380; *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.,* 730 F.2d 1452, 1461, 221 USPQ 481, 488 (Fed. Cir. 1984); *In re Papesch*, 315 F.2d 381, 386-387, 137 USPQ 43, 47-48 (CCPA 1963). For obviousness under 35 U.S.C. 103, all that is required is a reasonable expectation of success. *In re Longi*, 759 F.2d 887, 897, 225 USPQ 645, 651-652 (Fed. Cir. 1985); *In re Clinton*, 527 F.2d 1226, 1228, 188 USPQ 365, 367 (CCPA 1976). The Examiner believes that in the instant case one versed in the cooling art at the time the invention was made would have been definitely reasonably expecting a success of the combination (modification), since the teachings used for said combination (modification) have been gleaned from different modifications (embodiments) of the same invention.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anatoly Vortman whose telephone number is 571-272-2047. The examiner can normally be reached on Monday-Friday, between 10:00 am and 6:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Lynn Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anatoly Vortman
Primary Examiner
Art Unit 2835

AV